The character of commercial fishing in Icelandic waters in the fifteenth century

COD AND HERRING

AN OFFPRINT FROM

COD AND HERRING

THE ARCHAEOLOGY AND HISTORY OF MEDIEVAL SEA FISHING

Edited by

JAMES H. BARRETT AND DAVID C. ORTON

Paperback Edition: ISBN 978-1-78570-239-6
Digital Edition: ISBN 978-1-78570-240-2 (epub)

OXBOW | books

Oxford & Philadelphia
www.oxbowbooks.com

Published in the United Kingdom in 2016 by
OXBOW BOOKS
10 Hythe Bridge Street, Oxford OX1 2EW

and in the United States by
OXBOW BOOKS
1950 Lawrence Road, Havertown, PA 19083

Paperback Edition: ISBN 978-1-78570-239-6
Digital Edition: ISBN 978-1-78570-240-2 (epub)

A CIP record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

Names: Barrett, James H. (James Harold), editor. | Orton, David C. (David Clive), editor.
Title: Cod and herring : the archaeology and history of medieval sea fishing / edited by James H. Barrett and David C. Orton.
Description: Oxford; Philadelphia: Oxbow Books, 2016. | Includes bibliographical references.
Identifiers: LCCN 2016013177| ISBN 9781785702396 (softcover) | ISBN 9781785702402 (digital)
Subjects: LCSH: Fish remains (Archaeology) | Saltwater fishing–History–To 1500.
Classification: LCC CC79.5.A5 C63 2016 | DDC 930.1–dc23 LC record available at http://lccn.loc.gov/2016013177

Printed in the United Kingdom by Latimer Trend

For a complete list of Oxbow titles, please contact:

UNITED KINGDOM
Oxbow Books
Telephone (01865) 241249, Fax (01865) 794449
Email: oxbow@oxbowbooks.com
www.oxbowbooks.com

UNITED STATES OF AMERICA
Oxbow Books
Telephone (800) 791-9354, Fax (610) 853-9146
Email: queries@casemateacademic.com
www.casemateacademic.com/oxbow

Oxbow Books is part of the Casemate Group

Front cover: Design by Katie Gabriel Allen using a woodcut image from *Historia de Gentibus Septentrionalibus* by Olaus Magnus (used by permission of University of Glasgow Library, Special Collections)
Back cover: Medieval fish bones from Blue Bridge Lane, York (Photo: James Barrett)

Contents

Contributors

JAMES H. BARRETT, McDonald Institute for Archaeological Research, University of Cambridge, Cambridge, England

COLIN BREEN, School of Geography and Environmental Sciences, Ulster University, Coleraine, Northern Ireland

INGE BØDKER ENGHOFF, Natural History Museum of Denmark, University of Copenhagen, Copenhagen, Denmark

ANTON ERVYNCK, Flemish Heritage Agency, Brussels, Belgium

MARK GARDINER, Archaeology, School of Geography, Archaeology and Palaeoecology, Queen's University Belfast, Belfast, Northern Ireland

SHEILA HAMILTON-DYER, SH-D ArchaeoZoology, Southampton, England

JENNIFER HARLAND, Archaeology Institute, University of the Highlands and Islands, Orkney College, Kirkwall, Orkney, Scotland

POUL HOLM, School of Histories and Humanities, Trinity College Dublin, Dublin, Ireland

ANNE KARIN HUFTHAMMER, Department of Natural History, The University Museum, University of Bergen, Bergen, Norway

ANDREW K. G. JONES, Department of Archaeology, University of York, York, England

MARYANNE KOWALESKI, Department of History, Fordham University, Bronx, New York, USA

ALISON LOCKER, Escaldes-Engordany, Andorra

LEMBI LÕUGAS, Archaeological Research Collection, Tallinn University, Tallinn, Estonia

DANIEL MAKOWIECKI, Laboratory for Natural Environment Reconstruction, Institute of Archaeology, Nicolaus Copernicus University, Toruń, Poland

JAMES MORRIS, School of Forensic and Applied Sciences, University of Central Lancashire, Preston, Lancashire, England

GUNDULA MÜLDNER, Department of Archaeology, University of Reading, Reading, England

ARNVED NEDKVITNE, Department of Archaeology and History, University of Oslo, Oslo, Norway

ALF RAGNAR NIELSSEN, University of Nordland, Bodø, Norway

DAVID C. ORTON, BioArCh, Department of Archaeology, University of York, York, England

REBECCA REYNOLDS, Department of Archaeology, University of Nottingham, Nottingham, England

HELGE SØRHEIM, Museum of Archaeology, University of Stavanger, Stavanger, Norway

WIM VAN NEER, Royal Belgian Institute of Natural Sciences, Brussels, Belgium; Laboratory of Biodiversity and Evolutionary Genomics, University of Leuven, Leuven, Belgium

ORRI VÉSTEINSSON, Department of Archaeology, University of Iceland, Reykjavík, Iceland

Preface and Acknowledgements

The analysis of fish bones from archaeological sites is a highly specialised and painstaking task, requiring an abundance of the time that is so rarely available in either academic or commercial archaeology. Moreover, study of fish remains has seldom been at the top of archaeological research priorities. Nevertheless, over the last 40 years a few specialists across Europe have dedicated themselves to work of this kind, and thus to discovering the outlines of medieval fishing history around the North Atlantic, and the Irish, North and Baltic seas. Although mutually informed in terms of methodology, this fundamental research has often been carried out in the framework of national institutions and agendas. Concurrently, historians have independently striven to systematise and analyse complex corpora of textual evidence regarding medieval fishing and fish trade. Once again this work has sometimes occurred within national or regional schools of research. The results of these zooarchaeological and historical efforts have often proven surprising and important, revealing remarkable evidence of continuity and change. Archaeologists of medieval coastal settlements have also contributed much to our understanding of the relationship between people and the sea.

The present volume is an effort to enhance the value of this past work by crossing boundaries – between regions and between disciplines. It also emerges from a time when traditional zooarchaeology (the identification, quantification and interpretation of skeletal remains) has increasingly benefited from integration with biomolecular approaches, such as stable isotope analysis and the study of ancient DNA. These latter methods are not the main focus of the book – they are changing far too quickly for this to have been helpful. Nevertheless, they inform many of its chapters and Gundula Müldner has taken up the challenge of surveying the extant stable isotope evidence regarding human skeletal remains from medieval Britain. Even in the fields of zooarchaeology and history it is recognised, even hoped, that this volume will quickly become outdated. It is our aspiration that the collaborative process of consolidating what is known and unknown may already have accelerated the pace of current research on medieval sea fishing.

The idea behind the book emerged from an interdisciplinary conference organised by one of us (JHB) in Westray, Orkney, Scotland, in June of 2008. It was several years, however, before the groundwork could be laid – including finishing the analysis of major collections and the synthesis of decades of fish-bone and historical research. The initial practicalities were skilfully managed by Cluny Johnstone, then a postdoctoral research fellow on the 'Medieval Origins of Commercial Sea Fishing' project funded by the Leverhulme Trust. After a period of maternity leave Cluny decided to be a full-time parent and editing became our responsibility. DCO began the process while a postdoctoral research fellow on the Leverhulme Trust project 'Ancient DNA, Cod and the Origins of Commercial Trade in Medieval Europe'. JHB was then able to see it through to completion. This book is also based upon work from the COST Action Oceans Past Platform, supported by COST (European Cooperation in Science and Technology).

We are grateful to Julie Gardiner of Oxbow Books for her helpfulness and patience during the book's long gestation. Jennifer Harland (also a postdoctoral research fellow on the 'Medieval Origins of Commercial Sea Fishing' project) and Christine Harcus assisted with the original conference in Orkney, which was funded by the Leverhulme Trust, the McDonald Institute for Archaeological Research and the History of Marine Animal Populations project (supported by the Alfred P. Sloan Foundation). Many thanks are owed to Suzanne Needs-Howarth, who copy-edited the volume and helped compile Appendix 1.1, and to the McDonald Institute

for Archaeological Research, which contributed to the cost of her work. Dora Kemp also kindly assisted with copy-editing. The cover was designed by Katie Gabriel Allen using a woodcut image from *Historia de Gentibus Septentrionalibus* by Olaus Magnus (used by permission of University of Glasgow Library, Special Collections) and a photograph of medieval fish bones from York taken by JHB. Other image credits are given in the figure captions, and each chapter includes its own acknowledgements section when appropriate. Most importantly, we thank the contributors to this volume for the many years of careful research that their chapters represent.

James H. Barrett
University of Cambridge
David C. Orton
University of York

COST is supported by the EU Framework Programme Horizon 2020

COST (European Cooperation in Science and Technology) is a pan-European intergovernmental framework. Its mission is to enable break-through scientific and technological developments leading to new concepts and products and thereby contribute to strengthening Europe's research and innovation capacities. It allows researchers, engineers and scholars to jointly develop their own ideas and take new initiatives across all fields of science and technology, while promoting multi- and interdisciplinary approaches. COST aims at fostering a better integration of less research intensive countries to the knowledge hubs of the European Research Area. The COST Association, an International not-for-profit Association under Belgian Law, integrates all management, governing and administrative functions necessary for the operation of the framework. The COST Association has currently 36 Member Countries. www.cost.eu

8

The Character of Commercial Fishing in Icelandic Waters in the Fifteenth Century

Mark Gardiner

Introduction

Commercial fishing by its very nature was intimately connected with trade. Yet the subjects of fishing and trade in the Middle Ages have generally been studied separately. Without the ability to distribute and sell fresh fish very rapidly or to preserve fish for later sale and consumption, large-scale fishing was impossible. Some work on the connections between trade and fishing has been undertaken, and the broad outlines of their relationship are beginning to emerge. Barrett *et al*. (2004, 631) have argued that the advent of fishing on a substantial scale and the development of the fish trade around the end of the first millennium AD coincided with an increase in commerce in western Europe more generally. Kowaleski (2003) has identified a second stage in the commercialisation of fishing, which took place at the end of the fourteenth and during the course of the fifteenth century, during which the scale of production was substantially increased. The present paper examines further the concept of second-stage commercialisation by looking at fishing in Icelandic waters. It begins with a review of commerce between Scandinavia and northern Europe and sets the development of fishing within the context of the struggle for power between four parties: the English fishers and traders; the Icelanders; the Danish crown, as overlords of Iceland; and, later in the fifteenth century, Hanseatic merchants. The second issue considered here is the practical operation of fishing and trade. The paper concludes with an examination of the strategies adopted by all the parties as a means of understanding the rationality of their actions.

It would be possible to take a simple view of trade and fishing and argue that a larger market led to more extensive fishing; that the two were simply an example of demand stimulating supply. At the heart of this analysis is the view that fishing and trade must instead be studied as the result of social processes as well as economic ones. This approach has much in common with the culturalist position adopted by such anthropologists as Gudeman (2001). It regards trading systems as embedded within, or contingent upon, the societies in which they operate. Economies operate according to a rationale defined by their society, a view termed 'situated reason' (Gudeman 2001, 38–42). Behaviour is reasoned and structured according to the perspectives and value-systems of the participants. However, the problems become more complex when we begin to consider trade between cultures. This necessitated an imperfect compromise between the different economic and social values. The parties suppress or set aside their differences while they both benefit through the exchange of goods. Trade, however, carries a cost in terms of its social and economic side-effects. The practices and regulations which surround the exchange seek to limit those undesired consequences, though inevitably they cannot entirely contain them.

The historical context

Commercial contacts between the North Atlantic and northwestern Europe date to at least the Viking Age and continued through the eleventh century. Trade between Grimsby, in England, and Norway in the reign of the English king William I is implied by the escape of a hostage on a boat sailing between the two places (Arnold 1885, 202). The Icelandic *Orkneyinga saga* claims that merchants from Norway and Orkney came to Grimsby early in the twelfth century (Guðmundsson 1965, 130–8). Norwegian merchants were certainly established in London by AD 1130, when they are mentioned in regulations for foreign merchants, but it is possible that these even date to the eleventh century

(Bateson 1902, 499; Brooke and Keir 1975, 267). Such links have also been demonstrated by the quantity of medieval pottery from southeastern and eastern England found in Bergen, in Norway. The pottery suggests that there was intensified contact between England and Norway from the later twelfth century, although the source within England shifted in the thirteenth century (e.g. Blackmore and Vince 1989, 112).

The strength of trade between Britain and Norway, and the mutual benefit which was perceived by both sides, led in AD 1223 to the first trade agreement concluded by either country (CPR 1216–25, 384). The spirit of this agreement was reflected the following year in an exemption for Norwegian vessels from a general arrest of ships (Hardy 1833, vol. 1, 606–7). The main imports to England were fish and wood, which were supplied in return for grain and cloth. The level of Norwegian trade seems to have been largely maintained until the end of the thirteenth century, but the diplomatic relationship gradually cooled in the second half of the century as Norway moved closer to Scotland in its interests (Helle 1967, 12–13, 16–17, 32–3; Lloyd 1982, 125–6).

Norwegian control over foreign trade with the North Atlantic was strengthened in AD 1294 when merchants were forbidden to sail beyond Bergen without licence. In the early fourteenth century it was further decreed that they could not sail to the Norwegian colonies, including Iceland, the Faroe Islands and Shetland (DN, vol. 5, no. 23; Keyser & Munch 1849, no. 53). This is unlikely to have caused many problems for English merchants at first, since most of the trade was conducted in Norwegian vessels and there was little, if any, trade between England and the North Atlantic islands. Trade between Norway and England was substantial in the first decade of the fourteenth century. There were 75 ships at King's Lynn in the three trading seasons from February 1303 to November 1305, and smaller numbers at Ravenser at the head of the Humber and at Hull, all of which were key ports visited by Norwegians. In addition, there were an estimated 20 ships carrying fish operated by Hansa merchants (Nedkvitne 1983, 579). The numbers began to fall in the second decade of the fourteenth century with allegations of ill-treatment of merchants. It was said in AD 1312 that four hundred English were detained in Norway, though no doubt the numbers were much exaggerated (Lloyd 1982, 125–6, 151–2). By the second quarter of the fourteenth century the trading activity by Norwegians was substantially curtailed by competition with Hanseatic merchants, who largely took over the export of fish. The Norwegians maintained links with the North Atlantic islands where the Hansa merchants were not allowed to trade, but these were limited in scope. Commerce there also declined in the second half of the fourteenth century (Gelsinger 1981, 185–6; Thorsteinsson 1957, 168).

The Hansa created a firm foothold in Bergen, the main trading port in Norway, and had established a *Kontor* there in AD 1366 (Gade 1951, 55; Nedkvitne 2014, 336). Relations between the Hansa and the Norwegian government deteriorated, and the German merchants withdrew in AD 1368 upon the outbreak of war, which allowed English merchants briefly to establish themselves in Bergen. When peace was re-established in AD 1370, Hansa merchants returned and attacked the English (DN, vol. 19, no. 591). Nevertheless, trade by English merchants continued, and it has been argued by Schreiner (1941, 93) that it expanded during the AD 1390s, with shipments of grain and malt being traded for stockfish (DN, vol. 19, nos 618–20, 624, 628–9, 631; Tuck 1972, 76–8).

It is rather more difficult to trace fishing by foreign vessels than it is to trace trade, since the former was less closely regulated. Fishing vessels in foreign waters were rarely subject to the payment of dues, unless they sold their catch abroad. Nevertheless, it is apparent that English fishing vessels were venturing out into the North Atlantic by the end of the fourteenth century. Boats from Norfolk were working in Scottish waters, and in AD 1383 fishermen from Cromer and Blakeney complained that their doggers (fishing vessels) had been arrested for use in the navy and asked that they should be allowed to leave to fish off the coasts of Denmark and Norway (Riley 1863–4, vol. 2, 246; TNA, SC 8/102/5100; for doggers, see Marcus 1954). It was said that in AD 1406 one hundred fishermen from the same ports and elsewhere in Norfolk were working off the Norwegian coast when they were attacked and driven into 'Wynford', or Fensfjord, near Bergen (DN, vol. 19, no. 707; CPR 1408–13, 384). The accounts of the early voyages to Iceland recorded in the *Nýi Annáll* suggest that one of the first boats to arrive, in AD 1412, was a fishing vessel which appeared at Dyrhólar, at the southern-most tip of the island. The following year a trading vessel appeared with a licence from the Danish king, and in the same year 30 or more doggers also made the voyage to Iceland (Þorsteinsson 1922, 18). However, this may not have been the start of trade there, since it had been reported that there were foreign, possibly English, merchants in Vestmannaeyjar (Westman Islands) in AD 1396/97 (Þorsteinsson 1922, 8–9).

Trading and fishing activity in the North Atlantic expanded considerably during the early fifteenth century. It had become one of the major fishing areas for boats from the east coast of England within a few years of the appearance of that fishing vessel in Iceland in AD 1412. In AD 1417–18, 11 ships went from Scarborough alone (Heath 1968, 63). At about the same time German merchants had begun to sail to Shetland, presumably to purchase dried fish and perhaps coarse cloth. The earliest recorded trader there is mentioned in AD 1415, and the following year the Hansetag forbade voyages to Orkney, Shetland and the Faroe Islands, which perhaps suggests that such journeys were already taking place to the other islands as well (Friedland 1973, 68).

There were substantial profits to be made from fishing in the North Atlantic. Scarborough fishermen going to Iceland in the period had average gross incomes of £85 (Heath 1968, 57). Similar voyages were made up the Norwegian coast as far north as Finnmark, well beyond Bergen, to which foreign vessels were supposed to be restricted (DN, vol. 1, no. 670; Strachey 1767, 4, 79).

Fishing and trade grew so rapidly that in AD 1414 the Danish king sent a letter to Iceland forbidding trade with foreigners. The following year King Eric also wrote to the king of England, complaining about damage done in Iceland and to the fisheries around it. The English response was merely to confirm that fishermen should continue to take fish to the staple at Bergen for the payment of custom, and this was proclaimed in towns on the East Coast, including Newcastle, Scarborough, Hull, Boston and Lynn and the fishing settlements of Whitby, Grimsby, Dersingham, Blakeney, Burnham and Cromer (DN, vol. 10, nos 733, 735–7; Þorsteinsson 1922, 20). This proclamation was largely ignored. The emphasis of English activity in Iceland at this time seems to have been on fishing rather than on trade, although a list of exchange rates for (stock)fish and goods at Vestmannaeyjar suggests that there was some commerce too (DN, vol. 10, nos 742, 753).

The fishermen and traders continued to circumvent the restrictions placed upon them by the Danish king until AD 1429, when voyages to both Finnmark and Iceland were forbidden in the English parliament and merchants were restricted to the staple town of Bergen (Strachey 1767, 4, 347). However, this statute was little more effective than the earlier proclamation. Within a few years, the English crown, which had no great enthusiasm to enforce it, began to issue licences to trade, and fishing also continued unabated (Childs 1995, 18, n. 22 indicates the numbers of licences issued).

The murder in AD 1467 of the Danish governor (*hirðstóri*), Björn Þorleifsson, by English sailors in Rif triggered a new crisis in the relations between England and Denmark (Þorsteinsson 1970, 209–12). Though the Danish king lacked leverage in Iceland, it was possible to take action against English ships trading in the Baltic, and in June 1468 seven ships were seized in the Øresund. The event led to war between England and the Hansa, which was only concluded by the Treaty of Utrecht in 1474 (Strachey 1767, 6, 65). Agreement between the English and Danish crowns was not reached until AD 1490, when English boats were again allowed to trade with Iceland and to fish, provided they purchased licences at seven-year intervals. However, when the treaty was presented to the Icelandic *Alþing*, it struck out the clauses concerning fishing rights and limited it to only those vessels that were also trading. The concern, expressed some years later, was that the larger English vessels operated farther out at sea were catching fish and so preventing them from coming inshore where they might be caught by the Icelanders themselves (Baasch 1889, 58). A decree forbidding foreigners from over-wintering in Iceland was reiterated, and, if they were forced to stay in the country out of necessity, they were required to sell goods during the winter at the same price as in the summer (DI, vol. 7, no. 617; see also TNA, HCA 13/93, f. 253).

Ships from the German Hansa began journeying to Iceland in increasing numbers in the 1470s, and this inevitably brought them into conflict with the English vessels. In AD 1474, there was a fight between merchants from Hull and Bristol on the one hand and German traders on the other (DI, vol. 7, no. 66). The continuing lawlessness in Iceland led Richard III, in AD 1484, to direct ships from Norfolk and Suffolk to assemble in the Humber and go in convoy with those from Hull (Gairdner 1861–3, vol. 2, 287). Conflict persisted throughout the latter part of the fifteenth century and into the sixteenth century between the ships of the Hansa and those of England, even though hostilities had been formally concluded (Carus-Wilson 1954, 140–1; Seaver 1996, 205).

Fishing and trade

The businesses of fishing and trade were rarely separate activities for English merchants voyaging to Iceland. Routes pioneered by trading vessels seeking to obtain stockfish, caught by Icelanders and preserved by wind-drying, were followed by fishing vessels seeking to catch fish themselves and preserve it by salting, and *vice versa*. Once these routes were opened up, fishing and trading often took place on the same voyage. The evidence for this is abundant in the sixteenth century, but it is almost certain that the same was true in the fifteenth. The *Christopher* of Hull bought 4½ lasts and 60 stockfish (5460 fish), train (fish) oil and some cloth while fishing in Icelandic waters in AD 1430 (Childs 2000, 22). Three further examples drawn from the sixteenth century serve to illustrate this in greater detail. In a deposition, Richard Cutbert of Southolt (Suffolk) gave details of a voyage to Iceland *c*. AD 1535. He had chartered a boat, the *Anne*, from Snodland (Kent) to go to Iceland, but its departure was delayed. Eventually it returned with 6000 salted ling (*Molva molva*) and 4695 salted cod (*Gadus morhua*) worth about £450, and 27 lasts of stockfish (equivalent to 35,400 fish), 12 ‘wode’ of coarse cloth and two hogshead of train oil, worth about £250 in total (TNA, SP 1/99, ff. 170–8). The salted ling and cod were probably caught by the *Anne*. Salt was not produced in Iceland, so fish caught by native fishermen there were wind-dried in the winter and spring, and exported as stockfish. The *Anne* thus carried back a mixed cargo obtained by fishing and trade.

A second example illustrates the opportunistic nature of trade in the North Atlantic and how it did not always run along the neat lines sometimes imagined. The *Jesus* of Tenby (in Wales) set out in AD 1564 to sail to Newfoundland to go fishing, but it was so late in the year that during the

course of the voyage the ship turned back to Scotland and went to Orkney, where it met with two Flemish busses (seagoing fishing vessels). It hailed these and bought from them 144 barrels of herring (*Clupea harengus*). Subsequently, it encountered a ship from Hamburg that may have been sailing back from Iceland or Shetland, since it was loaded with stockfish. It bought part of that cargo too. Then the *Jesus* came into Papa Stour in Shetland, where it met another ship and bought from it salted ling and cod, which that vessel had evidently caught itself. Finally, the *Jesus* spent a couple of days fishing before returning to Tenby in the third week of September (TNA, HCA 13/15, f. 11).

This may not have been a typical voyage; equally, it was not wholly unusual. It reflects the pragmatic approach to the gathering of fish by English, or in this case, Welsh, vessels. Like many English ships, the *Jesus* was not just fishing, nor just trading, but sought to fill its hold with whatever fish, or indeed other cargo, might be obtained, wherever it might be obtained.

The third example is the *James* of Dunwich (in Suffolk), which went to Iceland in AD 1545 and appears to have taken a quite different approach. There survives for this voyage a list of laded goods. It is in some ways the most illuminating source of all, since from it we can infer the intentions of the venturers who equipped the ship. Most of the materials listed are victuals for feeding the ship's company and fishing gear, including hooks and lines for catching and salt for preserving the fish. The employees sent to Iceland included a merchant, Geoffrey Smythe, and the goods for sale are recorded separately from the company's victuals. These included food (butter, meal, wine), fabric, clothing and footwear (linen, broad cloth, shirts, shoes, boots) and utilitarian items (kettles, horseshoes, whetstones, wax) (Cooper 1939; Webb 1962, 82–3). Smythe would have been let off with the goods, presumably shortly after reaching Iceland, perhaps at one of the major ports in southwestern Iceland – for example, Vestmanaeyjar. There he would have set up a booth to store the merchandise and the stockfish taken in return. Towards the end of the season, in July or August, the *James* would have picked up Smythe and the stockfish that had been obtained in exchange before the ship set sail back to England.

Merchant ships required no adaption to undertake fishing. The fish were caught from small boats, skiffs or dogger boats, which were launched from the ships. The skiffs set long lines with hooks, often far from the coast (on such boats, see Webb 1962, 78, 81; TNA, SP 1/99, f. 170; on methods of fishing, see Jones 2000, 109). The mother ships might trade at small settlements when they came to land to take on fresh water, but this can only ever have been a minor activity. The greater part of trade was conducted by merchants who set up booths, or 'caves' as they are termed in contemporary English sources, close to the shore in ports.

The advantage of a mixed strategy combining fishing and commerce was that it ensured a return for the merchants, even in years when there was a paucity of stockfish to be obtained in Iceland. There was considerable competition among merchants for supplies of stockfish, and ships which arrived late in the season might find that others had already purchased all that was available (Childs 1995, 26). It was said that the violent events which led to the deaths of 40 English sailors in Grindavík in AD 1532 were precipitated by competition over supplies of stockfish. The English sailor John Bray bought stockfish which were to have been had by Hamburg merchants and then taunted the Germans to come and obtain them by force (H. Þorsteinsson 1922, 1, 92–3; B. Þorsteinsson 1957–61, 82).

Some smaller vessels engaged only in fishing. They may have lacked the expertise to trade or the capital to purchase goods to exchange for stockfish. The *Margaret Bonaventure* of Dunwich, a craft of 55 tonnes, was sent to fish between Scotland and Iceland in the 1560s equipped only with victuals for the crew and fishing gear (Williams 1988, 93). Though quite small, this vessel was close to the mean size of ships from the east coast and London voyaging to Iceland in AD 1533. As we might expect, ships from the major ports, such as Lynn, the Orwell (Ipswich) and London, tended to be amongst the largest. The 22 ships recorded under the heading of Dunwich, and presumably including the nearby ports of Southwold and Walberswick, were notably smaller, with a mean size of 37 tonnes (TNA, SP 1/80, ff. 60–78). It was evidently similar vessels – 22 fishing boats and 13 barks – which were drawn up on the beach at Walberswick in AD 1451 and were engaged in fishing and/or trading with Iceland, with the Faroe Islands and in the North Sea (Oppenheim 1907, 211).

The character of trade and fishing can be investigated further by examining English customs accounts. For this purpose, those of Hull have been chosen, because accounts of other ports have some limitations (as detailed by Childs 1995, 21). Hull was one of the major ports involved in Icelandic trade and fishing in the fifteenth century. Its commerce was as large or larger than that of Bristol and greater than that of London. The destination of the ships is not recorded, but it can be concluded with some certainty that it was Iceland from both the goods exported and the return cargo, which was formed exclusively of stockfish (Childs 1995, 20–1).

Table 8.1 shows the Hull ships that, according to the surviving custom accounts, made the most frequent voyages to Iceland and the number of stockfish which they bought on their return. The figures have been calculated on the basis that a 'hundred' of stockfish was often measured by a 'long hundred' of 120 (for salted fish the figure was 124 to the 'hundred'). A last was a 'thousand' stockfish, counted in a similar manner and so equal to 1200 fish (Hall

Table 8.1. Estimated number of stockfish imported to Hull from Iceland in selected ships (based on data in Childs 1994), mid– late fifteenth century. See text for method of estimating.

	1453	*1460*[1]	*1461*	*1462*[2]	*1463*[3]	*1465*	*1468*[4]	*1471*	*1472*	*1473*[5]
Mary of Hull	36,540	61,200	94,200					36,000		
Trinity of Hull			81,600		60,000	44,940	84,000			55,200
Anthony of Hull				193,080		66,840				
Peter of Hull					9600	7200				
Anne of Hull							143,580	37,260		
Total for all ships	100,500	73,200	175,800	207,490	73,200	133,380	227,580	73,260	25,200	94,440

Notes:
1. Account closes 12 August 1460; 2. Account opens 16 August 1462; 3. Account runs 6 July–26 August 1463; 4. Account runs 18 July–29 September 1468; 5. Account runs 6 August–29 September 1473

and Nicholas 1929, 17, 29; British Library, Lansdowne MS 21, f. 137).

There is notable variation in the figures, with, for example, the *Anthony* of Hull bringing back three times as many stockfish in AD 1462 as in 1465 and the *Anne* carrying a cargo in AD 1468 which was apparently four times as large as that in AD 1471. The general pattern of trade with Iceland from Hull suggests that there was a significant change after AD 1468, when it declined considerably. There are problems in refining this overall picture because the customs accounts in some years open too late or close too early to allow us to be certain that they include all ships trading with Iceland. Moreover, the volume of trade must have depended on the number of ships making the voyage, which was always rather small. Nevertheless, it is very likely that the much smaller numbers of stockfish imported in AD 1471 reflect the crisis following the murder of Björn Þorleifsson in AD 1467. The impact of this was not felt in AD 1468, but in June that year the English were banned from sailing to Iceland and war broke out with the Hansa. The persistence of trade, albeit at a lower level, suggests that, as in the past, Danish decrees were not fully effective so far from the seat of power. Nevertheless, they clearly did have an impact on the volume of commerce.

If we set these particular events to one side, we might suggest three different reasons for the varying quantities of stockfish brought back in the same ship. First, the cargo unloaded at Hull and subject to customs dues there might not have represented the full contents of the ship. It may have sailed on elsewhere with a hold part full of stockfish. Second, the return cargoes may have been affected by the catches of fish by Icelanders and the competition to obtain stockfish from them. In short, the size of cargo was supply-led. Third, the cargo of stockfish may have been demand-led. Merchants may have decided not to send large volumes of goods to Iceland and consequently the volume of fish obtained in return was smaller.

The first of these possible explanations can be rejected. For a few voyages we have customs accounts recording not only the individual merchants importing stockfish, but also the goods which were sent out for exchange. A total of 24 merchants laded goods on to the *Mary* of Hull in AD 1461 and are recorded as importing stockfish; two more export, but do not import; and seven import stockfish and have no recorded exports. The two exporters both have locative surnames – John Richemond and John Hebden – and it is possible that they appear amongst the unaccounted importers. Similarly, the *Trinity* of Hull, which sailed the same year, had 16 merchants who exported and brought back goods to Hull in return. There were only two exporters without imports which we can recognise, and 6 unaccounted importers. Clearly, in most cases the merchants laded and off-loaded goods at Hull.

It is more difficult to distinguish between the other alternatives. Did ships leave Hull with a cargo of goods to exchange for stockfish but found too few fish offered in exchange? In theory this hypothesis could be explored by looking at the match between the goods exported and the fish imported. If we find that the two are poorly correlated, then it would be likely that this was because the merchants in Iceland were unsuccessful in obtaining supplies of stockfish. Unfortunately, this is not easy to do. We can examine three voyages for which we have customs records for both the exported goods and the stockfish obtained in return. Table 8.2 sums the most common goods taken on each voyage. This excludes items, such as kettles and belts, swords and silk, which were freighted only occasionally. Proper comparison requires that we know the relative values of each of these goods in Iceland. We do have a list of values in terms of stockfish proclaimed in Vestmanaeyjar in AD 1420, but it is difficult to translate its information into the units of measure used by English merchants (DI, vol. 4, no. 337). Furthermore, we need to be aware that the fish listed in the AD 1420 table may be *vættir* fish, that is 'fish' used as a unit of currency rather

Table 8.2. Quantities of main commodities exported to Iceland and estimated number of stockfish imported to Hull (based on data in Childs 1994). See text for method of estimating.

	Mary *of Hull 1460*	Trinity *of Hull 1461*	Mary *of Hull 1461*
Exports			
Standard cloths	52	65	70
Canvas (ells)	130	216	92
Osmond (barrels)[1]	11	29	44
Beer (barrels)[1]	210	262	117
Meal (barrels)[1]	199 or 331	207 or 323	161 or 261
Malt (quarters)	0	38	39
Honey (barrels)	14	4	4
Wax (lbs)	0	50	244
Horseshoes	200	0	500
Imports			
Stockfish (n)	61,200	81,600	94,200

Note:
1. The figures use barrels as the measure where appropriate, though some goods were measured in both lasts and barrels. The figures have been calculated by taking 1 last of beer as equal to 12 barrels and 1 ship last of osmund (iron) as equivalent to 13 barrels (Hall and Nicholas 1929, 18, 23). Zupko (1977, 136) indicates that 1 last of meal was also equal to 12 barrels. A barrel contained a volume of meal equal to 32 gallons according to statutes of the late fourteenth and fifteenth centuries, and in the seventeenth century a last was said to contain 640 gallons of grain (Hall and Nicholas 1929, 21, 30, 49). This might suggest alternatively that 1 last was equivalent to 20 barrels. Both the upper and the lower figures have been given above.

than actual stockfish (Gunnarsson 1983, 18–19; Hastrup 1990, 139–41).

Given these uncertainties, we have inadequate evidence to decide between the second and third hypotheses. We cannot tell whether the variation in the size of imported cargoes of stockfish in the same ship in different years was a consequence of the availability of stockfish in Iceland or the volume of goods exported from Hull for exchange. Whichever was the case, it clearly had an impact on the profitability of the voyage. The hire of the ship, the wages of the crew and the supply of victuals were fixed, regardless of the volume of goods obtained in exchange. If the variation in imports was due to the availability of stockfish in Iceland, then this was more serious for merchants who had invested in goods for export and were unable to exchange them. There was a clear commercial logic in fishing from merchant boats, since it provided an alternative source of fish for import, though we cannot know whether this was what actually happened on the Hull ships examined here.

The emphasis in the discussion so far has been on fishing and trade by English merchants. However, much of the fishing was undertaken by Icelanders. The Hanseatic ships did not fish at all, and their cargoes were entirely made up of dried fish purchased from Icelandic fishers. We need to turn now to Icelandic fishing practices, but we must start off by acknowledging that the relevant historical evidence regarding the fifteenth century is very limited. We may be able to back-project traditional fishing practices, but we need to be cautious to avoid running the risk of creating an ethnographic present in which we imagine the medieval past to be no different from more recent practices (Krivogorskaya *et al*. 2005, 45). Nevertheless, it seems probable that in the fifteenth century fishing took place in the winter or spring, when there was otherwise little call on labour, so it did not compete with work on the farm (Kristjánsson 1982, 485–6). Farmers from inland areas may have moved to temporary settlements or outstations (*útver*) on the coast, where they occupied huts (*verbúðir*), as they did in later centuries. Fish were prepared and dried at the fishing stations (Amundsen *et al*. 2005). The fish could either have been brought back to the home farm at the end of the fishing season, or been kept at the fishing stations and taken by sea to the trading sites.

We can provide some historical substance to these suppositions. There survives an account book for AD 1558 drawn up by the Bremen merchant Claus Monnickhusen, which lists fishers who owed him for goods that had been supplied in advance (Hofmeister 2001). Monnickhusen had a trading site at Kumbaravogur, on the north coast of Snæfellsnes facing Breiðafjörður, which was an important fishing area (see Gardiner and Mehler 2007, 415–18 for details). It was one of a number of trading sites in the area. Others were to be found on the south side of Snæfellsnes at Buðir and Arnarstapi and on the north side at Rif, Grundarfjörður and Nesvogur (Figure 8.1). The account book lists the names of the individuals and the farms from which they came, allowing us to identify the location of indebted fisher–farmers within the hinterland of Kumbaravogur. We have no way of knowing whether these represented all the fisher–farmers who regularly came to trade at that site, but it is sufficient to provide an understanding of the Icelandic practice of fishing.

The distribution shows that most fisher–farmers selling stockfish at Kumbaravogur came from the north coast of Snæfellsnes, from the coasts of Fellströnd and Skarðsströnd, and from islands in Breiðafjörður. Almost all of these fishers were from farms that were situated on or very close to the sea, and they could have operated from their homes. It is likely that they would have brought stockfish to Kumbaravogur by boat. Indeed, there would have been no alternative for those fishers based on islands in Breiðafjörður. A smaller number came from the east end of

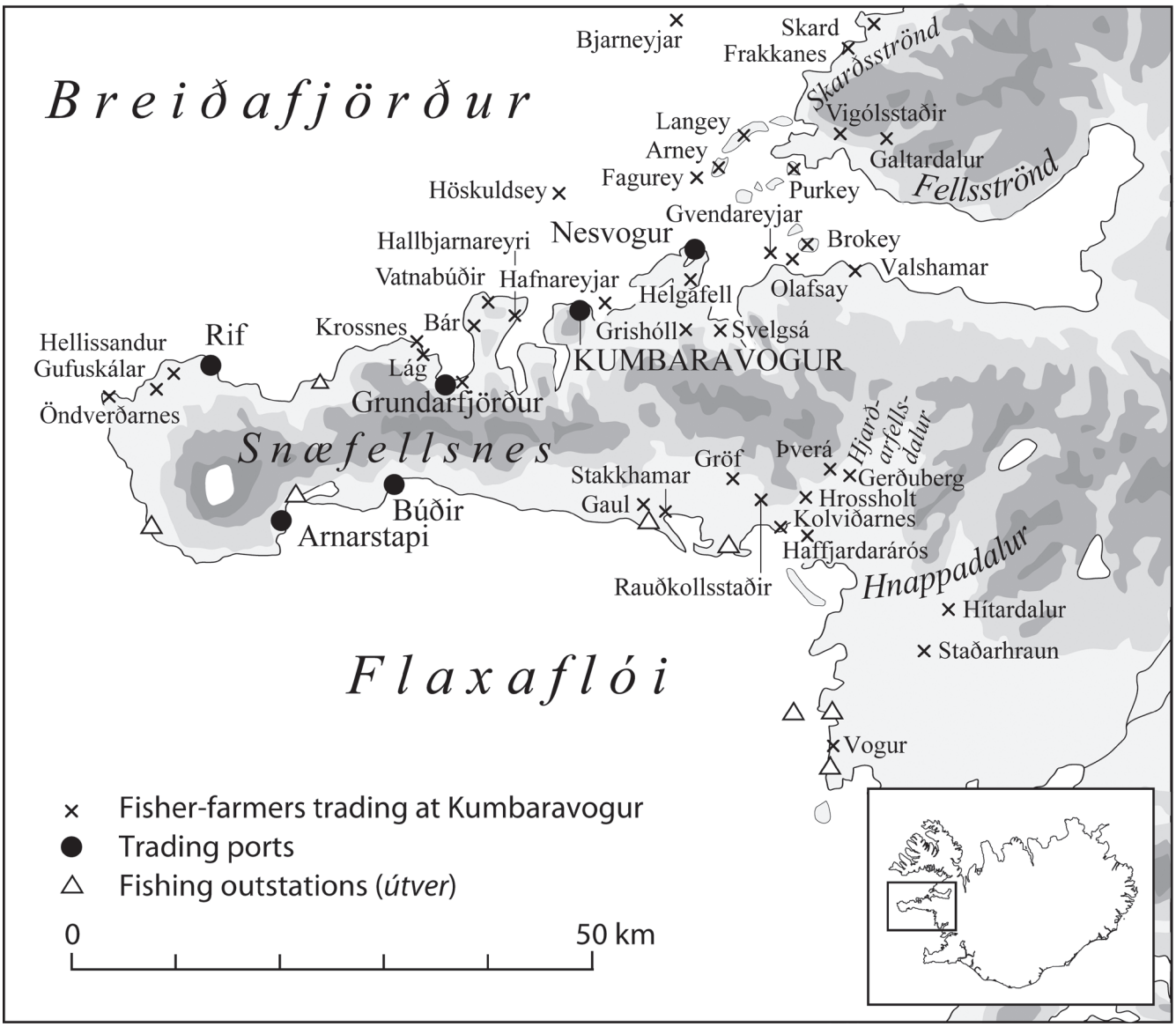

Figure 8.1. The trading hinterland of Kumbaravogur (Drawing: Libby Mulqueeny after Hofmeister 2001, 31, with outstations (útver) from Kristjánsson 1982).

the south coast of Snæfellsnes and even from inland farms in Hnappadalur. Presumably, those fishers based to the west of Gaul and Stakkhamar were trading at Arnarstapi and Búðir, and therefore had no dealings with Monnickhusen at Kumbaravogur. Again, most of the fishers operated from farmsteads close to the sea. Only two farmsteads were very far inland: those at Staðarhraun and nearby Hítardalur. Even these were little more than 10 km from the coast. It is much less likely that those from the south of Snæfellsnes and Hítardalur transported fish to Kumbaravogur by sea, since the journey around the west end of the peninsula is very long. It is probable that they brought fish by land over the pass through Hjarðarfellsdalur or over one of the passes to the east, climbing up from Hnappadalur.

In this area of Iceland no farm was very distant from the sea, since all the better land is situated towards the periphery. Most fishers would have been able to operate from home and many from bases situated on their own land (*heimræði*). Only a few outstations are know from more recent times, and some of these may have been used in the sixteenth century for farms, particularly those in Hítardalur, which were farther from the coast. The broad bays of Flaxaflói and Breiðafjörður were good fishing grounds, and the evidence from Monnickhusen's account book suggests that many farmsteads practised fishing. It suggests that in the mid-sixteenth century there were few constraints in getting access to the sea or selling dried fish to foreign merchants. Much the same was probably the case fifty years earlier, at the end

of the fifteenth century. Kumbaravogur and Grundarfjörður had both been used as trading sites since before AD 1523, and there were other similar sites in the vicinity, including Rif ('Gamelwick'), which had been used since at least the late fifteenth century (DI, vol. 16, nos 234, 268, 285).

The evidence from England, Germany and Iceland has allowed us to construct a reasonable picture of fishing and trading patterns in the fifteenth century, which can now be summarised. Substantial numbers of ships sailed northwards each year from England to Icelandic waters. In AD 1528, as many as 149 ships made the voyage, though this was perhaps after some decades of growth in fishing; in the fifteenth century the numbers may have been rather smaller (Jones 2000, 105–6; Williams 1988, 95). English activity included both fishing and trading, often from the same vessels, though some smaller ships may have engaged only in fishing. Hansa activity, by contrast, was solely limited to trading: there is no evidence for fishing by Hanseatic vessels. Trade was carried out at a series of established centres around the coast of Iceland, particularly in the southwest, west and northwest, the areas with the best fishing grounds (Gardiner and Mehler 2007, 389–95). The trading sites allowed dried fish prepared by numerous fisher–farmers to be bulked for transport back to England and continental Europe. Fishing by Icelanders remained a small-scale enterprise in spite of the demand from foreign merchants.

The strategies of fishing and trade

Trade between peoples of different cultures involves careful negotiation to establish both the practices by which exchange is performed and agreement on systems of value. Once agreement has been reached on these matters, it needs to be continually renegotiated, since trade affects both socially and economically all those that it touches. By the end of the fifteenth century in Iceland, there were three parties at least to the trade – the Icelanders, the English and the Hansa merchants. The Danish crown was a fourth party; though not engaged in trade, it was seeking to regain power and control over activity in an area in which it had little influence. It is useful to examine each of the parties in turn to look at their strategies as they had evolved by AD 1500 in terms of their 'situated reason' (see above) and consider the impact these had on fishing.

Fundamental to the Icelandic conception of trade was the view that fishing should always be an adjunct of farming and not a separate activity in itself (see Chapter 7). The farm (*bú*) was treated as the unit of production and consumption. During the fifteenth century, when there were labour shortages due to decline in population following the outbreak of plague in AD 1404–5, a series of measures were enacted to tie labourers to work on farmsteads. The *búalög*, or household law, which is known from a manuscript dating to the mid-fifteenth century, regulated the duties and rights of farm servants (Hastrup 1990, 54–7). Cottagers (*búðsetumenn*) who did not own enough cattle to provide a living were not allowed to make a boat or to employ others at sea (Hastrup 1990, 109). The result was that fishing did not develop as an industry in itself, but was always an appendage which was subordinate to farming. The aim of fishing by Icelanders was not to accumulate capital, which, in any event, was difficult in a coinless society, but to provide a source of food and through exchange to acquire imported food and other goods. Fishers did not seek to build larger ships for this purpose or to expand their enterprise. It was necessary only to satisfy the needs of the farming household.

The absence of urban development in Iceland was a corollary of the centrality of the farm. The existence of towns depends upon trade and craft production, but in Iceland the latter could only take place within the context of the farm. Trade was accepted as a necessary part of Icelandic life, but traders were not. The sagas portray a society in the thirteenth century in which commerce was deeply alien. Instead, gift-giving, both willing and enforced, was more common. 'There was little time spent bargaining over price, the hasty abandonment of which marked the rejection of the mercantilist mode' (Miller 1986, 46). There is little evidence that attitudes had changed by the fifteenth century, when prices for trade in fish were still being set (DI, vol. 4, no. 337). The traders themselves were tolerated as a necessary evil, but they were kept at arm's length and largely excluded from Icelandic society. One of the principles was that foreigners should not be allowed to settle in the country, and this was achieved by preventing over-wintering. A decree against the year-round presence of foreigners was first recorded in *Jónsbók* in AD 1281, when it was aimed at Norwegians. It was repeated in AD 1431 (DI, vol. 4, no. 506), this time with the English in mind, and again in the *Piningsdómur* of AD 1490. The combined result of an emphasis on the farm and measures against the permanent settlement of traders was that urban centres failed to develop, even in major places of trade, such as Vestmannaeyjar and Hafnarfjörður.

The strategies of the English traders have already been discussed in part. The investment in chartering and outfitting a vessel for Iceland was considerable, and the risks were also very substantial. The *James* of Dunwich is one of the few Iceland-bound ships for which we have complete records for the expenses of outfitting. In AD 1545, the costs of equipment and victuals were £151, goods for sale were £37 and wages for the crew were £99, a total of £287 (Cooper 1939). The costs were not always as great as this. The expense of chartering the *Christopher* of Southwold in the 1530s with its equipments, stores and salt for preserving the catch was £120. It was reckoned by deponents in a subsequent trial that the two venturers would have made a profit of £20 each, equivalent to a return on capital of 33%. This figure is comparable with Newfoundland voyages by

French vessels in the mid-sixteenth century, which produced a return of 27.5% (Innis 1954, 21; TNA, SP 1/99, ff. 170–8). The investment and profit had to be set against the risk of the ships foundering, being captured by pirates off the Scottish coast or being attacked by Hansa merchants (Williams 1988, 90). One means to reduce the investment was to involve a larger number of parties in the costs of equipping a ship. This was clearly the approach taken to the ships leaving Hull in the fifteenth century, and some merchants chose to diversify their risks further by investing in goods dispatched on more than one ship. An example is Nicholas Stubbs, who in AD 1461 sent cloth, barley meal, honey and iron on the *Mary* of Hull and cloth, beer, belts, rye meal, knives and iron on the *Trinity* of Hull. Both ships were bound for Iceland and returned with cargoes of stockfish obtained in exchange (Childs 1984, 32, 33, 35, 37).

The approach of Hansa merchants to the Icelandic trade has not been considered so far. Their interests were well served by the establishment of the staple at Bergen, where there was a permanent settlement of merchants and a supply of stockfish from northern Norway. The Bergen *Kontor* allowed German merchants to dominate trade in the North Atlantic (Gade 1951, 92; Nedkvitne 2014, 277–332). The nature of trade in dispersed ports in Iceland made the establishment of something approaching a trade monopoly more difficult. This may explain the ambivalent attitude of the Hansa towns to direct trade with Iceland. Lübeck and Bergen were opposed to such a move and wished that trade continue to be channelled through Bergen (DI, vol. 6, no. 363). However, within a few years ships were regularly travelling from the German ports to Iceland. The Hansa merchants did not adopt the diversified approach to obtaining fish of their English counterparts and were dependent on acquiring sufficient stockfish. However, they also developed other exports that had been partially or wholly neglected by the English, including coarse cloth (*vaðmal*), hides, eider-down and sulphur (Marcus 1980, 154). There was sharp competition for the supply of stockfish, but it was more difficult to establish in Iceland the near-monopoly that had applied in Bergen. Many ports had developed in the southwest of Iceland, at Straum, Vatnleysa, Hafnarfjörður, Keflavík, Básendar and Grindavík, and it was from these that the English ships were progressively harassed or driven out in the last years of the fifteenth and early sixteenth centuries, though they continued to trade in the Vestmannaeyjar (Þorsteinsson 1970, 246–8; Historical Manuscripts Commission 1883, 13, 70).

The final party which had influence on fishing and trading in Iceland was the Danish crown. Up to AD 1449, successive kings of Denmark struggled to maintain the Bergen staple, through which fish should be traded. Throughout the fifteenth century, they worked to limit the influence of the English in Iceland and to restrain Hanseatic power in the North Atlantic. Lacking a naval presence and any military capability in Iceland severely limited what they might hope to achieve. The only significant measure which might be adopted to force the English crown to negotiate was to seize ships in the Øresund, a tactic used twice, in AD 1447 and in 1468 (Þorsteinsson 1957–61, 70–1). But though this reduced English activity in Iceland, it did not prevent it. By the end of the fifteenth century, Danish policy had shifted to taxing both merchant and fishing vessels (Webb 1962, 84). Whether Danish policy extended to playing off the English against the Hansa merchants is unclear, though it was perhaps hardly necessary, since the relationship between the two groups remained very poor. The regulation of Hansa merchants was a good deal easier for Danish officials in Iceland than was the management of English ships, because the English mixture of fishing and trade was difficult to regulate and tax. Trade might take place when vessels came inshore to shelter and take on firewood or water, or it might be carried out in a more systematic way. In order to prevent this more systematic trade, fishing vessels departing for Iceland in AD 1491 were ordered to take no more victuals than were required for the voyage (Davis 2004, vol. 2, no. 824). The aim was to ensure that all exported goods paid customs dues in England and to prevent opportunistic trading in Iceland, which might otherwise not be taxed.

Conclusions

Rather than examining Icelandic fishing in terms of politics, economics and practical operation (e.g. Carus-Wilson 1954; Jones 2000; Þorsteinsson 1957–61; 1970), this study has sought to examine the strategies of the participants and to consider their different aims and cultural values. It has been argued above that the Icelandic enterprise was part of what Kowaleski (2003) identified (though she does not use the term) as second-stage commercialisation. This was a step-change in the level of investment and the scale of fishing that took place around the beginning of the fifteenth century. It was marked by longer-distance voyages in search of fish, the adoption of improved methods of fish preserving and the use of larger vessels (Kowaleski 2003, 220–7; Unger 1978, 345–9). Like the first stage of commercialisation of fishing, which Barrett *et al*. (2004) have identified taking place around AD 1000, this phenomenon seems to have affected not only Britain, but also much of northwestern Europe at about the same time (see comments by Unger 1978, 348–9, 353–6).

It is important to emphasise that the adoption of capital-intensive fishing did not drive out small-scale family or group fishing enterprises, which continued to work local waters (see, for example, Sweetinburgh 2006, 96). In Iceland, the second-stage fishing vessels worked by English sailors operated concurrently (though usually farther out to sea) with the smaller, ‘first-stage’ vessels of the Icelanders. The Icelandic fishers were farm-based, and their enterprise required less capital investment, particularly

when it was operating from a home base. Their activity was complementary to English fishing and trading practices; it did not act in rivalry, and it allowed the English to diversify risk. The two enterprises met at trading sites where the stockfish could be bulked or amassed by English and Hanseatic traders for shipping back to their home ports.

Three key points have been advanced in this paper. The first is that for the English the businesses of fishing and trade in the North Atlantic were inseparable. This does not mean that every vessel did both, but rather that it is wrong to assume that most ships were engaged exclusively in either fishing or trade. This mixed approach stands in sharp contrast to that of the Hanseatic merchants, who were solely traders. They do not seem to have undertaken any fishing themselves. The second point is that the participants in fishing operations were working according to different strategies, which become comprehensible once we understand the cultural context in which their decisions were made. The final point is that the study of the fishing by the English and an understanding of the trading operations by the Hansa has helped to clarify the emerging concept of second-stage commercialisation of the fishing industry.

Acknowledgements

This paper is part of a study of fishing and trading in the North Atlantic that is a joint project with Dr Natascha Mehler of the University of Vienna, and I am indebted to her for valued comments and assistance in many ways. Anne Drewery and Christopher Whittick kindly gave me their notes on some documents at The National Archives. I am also grateful to Maryanne Kowaleski for sending me copies of her papers.

Archival references

British Library (London), Lansdowne MSS
TNA The National Archives (Kew, London):
SC 8, Ancient Petitions
SP 1, State Papers, Henry VIII: General Series
HCA 13, High Court of Admiralty, Instance and Prize Courts: Examinations and Answers

References

Amundsen, C., S. Perdikaris, T. H. McGovern, Y. Krivogorskaya, M. Brown, K. Smiarowski, S. Storm, S. Modugno, M. Frik & M. Koczela. 2005. Fishing booths and fishing strategies in medieval Iceland: an archaeofauna from the site of Akurvík, north-west Iceland. *Environmental Archaeology* 10: 141–98.

Arnold, T. (ed.) 1885. *Symeon Monachi opera omnia. Volume 2: historia regum*. (Rolls Series). London: Longman.

Baasch, E. 1889. *Die Islandfahrt der Deutschen, namentlich der Hamburger, vom 15. bis 17. Jahrhundert*. (Forschungen zur hamburgischen Handelsgeschichte 1). Hamburg: Herold Buchhandlung.

Barrett, J. H., A. M. Locker & C. M. Roberts. 2004. 'Dark Age Economics' revisited: the English fish bone evidence AD 600–1600. *Antiquity* 78: 618–36.

Bateson, M. 1902. A London municipal collection of the reign of John. *English Historical Review* 17: 480–511.

Blackmore, L. & A. Vince. 1989. *Medieval Pottery from Southeast England Found in the Bryggen Excavations, 1955–68. Volume 2: the Bryggen pottery*. (Bryggen Papers Supplementary Series 5). Bergen: University of Bergen.

Brooke, C. N. L. & K. Keir. 1975. *London, 800–1216: the shaping of a city*. London: Secker and Warburg.

CPR Calendar of Patent Rolls 1216–25. 1901. London: HMSO.

CPR Calendar of Patent Rolls 1408–13. 1909. London: HMSO.

Carus-Wilson, E. M. 1954. *Medieval merchant venturers: collected studies*. London: Methuen.

Childs, W. R. 1984. *The customs accounts of Hull, 1453–1490*. (Yorkshire Archaeological Society Record Series 144). Leeds: Yorkshire Archaeological Society.

Childs, W. R. 1995. England's Icelandic trade in the fifteenth century: the role of the port of Hull, in P. Holm, O. U. Janzen, O. Uwe & J. Thor (ed.) *Northern Seas Yearbook, 1995*: 11–31. (Fiskeri- og sofartsmuseets studieserie 5). Esbjerg: Fiskeri- og Søfartsmuseet.

Childs, W. R. 2000. Fishing and fisheries in the Middle Ages: the eastern fisheries, in D. J. Starkey, C. Reid & N. Ashcroft (eds) *England's Sea Fisheries: the commercial sea fisheries of England and Wales since 1300*: 19–23. London: Chatham.

Cooper, E. R. 1939. The Dunwich Iceland ships. *Mariner's Mirror* 25: 170–7.

Davis, N. 2004. *Paston letters and papers of the fifteenth century. Volume 2* (Early English Text Society Supplementary Series 21). Oxford: Clarendon Press.

DN Diplomatarium Norvegicum 1847–2011. *Diplomatarium Norvegicum*. Oslo: Dokumentasjonsprosjektet. http://www.dokpro.uio.no/dipl_norv/diplom_felt.html.

Friedland, K. 1973. Der Hansische Shetlandhandel, in K. Friedland (ed.) *Stadt and Land in der Geschichte des Ostseeraums*: 66–79. Lübeck: Verlag Max Schmidt-Romhild.

Gade, J. A. 1951. *The Hanseatic Control of Norwegian Commerce During the Late Middle Ages*. Leiden: Brill.

Gairdner, J. (ed.) 1861–3. *Letters and Papers of Richard III and Henry VII*. (Rolls Series). London: Longman.

Gardiner, M. F. & N. Mehler. 2007. English and Hanseatic trading and fishing sites in medieval Iceland: report on initial fieldwork. *Germania* 85: 385–427.

Gelsinger, B. E. 1981. *Icelandic Enterprise: commerce and economy in the Middle Ages*. Columbia: University of South Carolina Press.

Gudeman, S. 2001. *The Anthropology of Economy: community, market and culture*. Oxford: Blackwell.

Guðmundsson, F. 1965. *Orkneyinga saga*. Reykjavík: Hið Islenzka Fornritafélag.

Gunnarsson, G. 1983. *Monopoly Trade and Economic Stagnation: studies in the foreign trade of Iceland 1602–1787*. Lund: Ekonomisk-historiska Föreningen i Lund.

Hall, H. & F. J. Nicholas (eds) 1929. *Select Tracts and Table Books Relating to English Weights and Measures (1100–1742)*. (Camden Miscellany 15, Camden Society 3rd Series 41). London: Royal Historical Society.

Hardy, T. D. (ed.) 1833. *Rotuli litterarum clausarum in turri Londinensi asservati*. Vol. 1. London: Record Commissioners.

Hastrup, K. 1990. *Nature and Policy in Iceland 1400–1800: an anthropological analysis of history and mentality*. Oxford: Oxford University Press.

Heath, P. 1968. North Sea fishing in the fifteenth century: the Scarborough fleet. *Northern History* 3: 53–69.

Helle, K. 1967. Trade and shipping between Norway and England in the reign of Håkon Håkonsson (1217– 63). *Sjøfartshistorisk Årbok* 1967: 7–34.

Historical Manuscripts Commission. 1883. *Calendar of Manuscripts of the Marquis of Salisbury Preserved at Hatfield House*. London: Historical Manuscripts Commission.

Hofmeister, A. E. 2001. Das Schuldbuch eines Bremer Islandfahrers aus dem Jahre 1558. *Bremisches Jahrbuch* 80: 20–50.

Innis, H. A. 1954. *The Cod Fisheries: the history of an international economy*. (Revised edition). Toronto: University of Toronto Press.

Jones, E. T. 2000. England's Icelandic fishery in the early modern period, in D. J. Starkey, C. Reid & N. Ashcroft (eds) *England's Sea Fisheries: the commercial fisheries of England and Wales since 1300*: 105–10. London: Chatham.

Keyser, R. & P. A. Munch (eds) 1849. *Norges gamle love indtil 1387*. Vol. 3. Christiania: Gröndahl.

Kowaleski, M. 2003. The commercialization of the sea fisheries in medieval England and Wales. *International Journal of Maritime History* 15(2), 177–232.

Kristjánsson, L. 1982. *Íslenzkir Sjávarhættir*. Vol. 2. Rekyjavík: Bókaútgáfa Memmingarsjóds.

Krivogorskaya, Y., S. Perdikaris & T. H. McGovern. 2005. Fish bones and fishermen: the potential of zooarchaeology in the Westfjords. *Archaeologia Islandica* 4: 31–50.

Lloyd, T. H. 1982. *Alien Merchants in England in the High Middle Ages*. Brighton: Harvester Press.

Marcus, G. J. 1954. The English dogger. *Mariner's Mirror* 40: 294–6.

Marcus, G. J. 1980. *The Conquest of the North Atlantic*. Woodbridge: Boydell.

Miller, W. I. 1986. Gift, sale, payment, raid: case studies in the negotiation and classification of exchange in medieval Iceland. *Speculum* 61: 18–50.

Nedkvitne, A. 1983. Der Stukturwandel im nordeuropäischen Seehandel vom 12.–14. Jahrhundert: seine Bedeutung für die norwegischen Seehandelsstädte, in G. P. Fehring (ed.) *Seehandelszentren des nördlichen Europa: Der Strukturwandel vom 12. zum 13. Jahrhundert*. (Beiträge des Ostsee-Kolloquiums, Lübeck 1981): 261–9. (Lübecker Schriften zur Archäologie und Kulturgeschichte 7). Bonn: Dr Rudolf Habelt.

Nedkvitne, A. 2014. *The German Hansa and Bergen*. (Quellen und Darstellungen zur Hansischen Geschichte, Neue Folge 70). Vienna and Cologne: Böhlau.

Oppenheim, M. 1907. Maritime history, in W. Page (ed.) *The Victoria History of the County of Suffolk*. Vol. 2: 199–246. London: Archibald Constable.

Riley, H. T. (ed.) 1863–4. *Chronica monasterii S. Albani: Thomae Walsingham, quondam monachi S. Albani, historia anglicana*. (Rolls Series). London: Longman.

Schreiner, J. (ed.) 1941. *Hanseatene og Norge i det 16. århundre*. Oslo: J. Dybwad.

Seaver, K. 1996. *The Frozen Echo: Greenland and the exploration of North America*. Stanford: Stanford University Press.

Strachey, L. (ed.) 1767. *Rotuli parliamentorum: ut et petitiones, et placita in Parliamento*. London: Record Commissioners.

Sweetinburgh, S. 2006. Strategies of inheritance among Kentish fishing communities in the later Middle Ages. *History of the Family* 11: 93–105.

Thorsteinsson, B. 1957. Island, in G. Authén, A. E. Christensen, E. Lönnsroth, V. Niitemaa & B. Thorsteinsson (eds) *Hansestæderne og Norden*: 165–95 (Det Nordiske historikermøde i Århus 7–9. August 1957). Århus: Universitetsforlaget i Århus.

Þorsteinsson, B. 1957–61. Henry VIII and Iceland. *Saga-Books of the Viking Society* 15: 67–101.

Þorsteinsson, B. 1970. *Enska öldin í sögu Íslendinga*. Reykjavík: Mál og Menning.

Þorsteinsson, H. (ed.) 1922. *Annales Islandici Posteriorum Saeculorum: Annáler 1400–1800. Volume 1*. Reykjavík: Félagsprentsmiðan.

Tuck, A. 1972. Some evidence for Anglo–Scandinavian relations at the end of the fourteenth century. *Mediaeval Scandinavia* 5: 75–88.

Unger, R. W. 1978. The Netherlands herring fishery in the late Middle Ages: the false legend of Willem Beukels of Biervliet. *Viator* 9: 335–56.

Webb, J. 1962. *The Great Tooley of Ipswich: portrait of an early Tudor merchant*. Ipswich: Suffolk Record Society.

Williams, N. J. 1988. *The Maritime Trade of East Anglian Ports 1550–1590*. Oxford: Clarendon Press.

Zupko, R. E. 1977. *British Weights and Measures: a history from antiquity to the seventeenth century*. Madison: University of Wisconsin Press.